

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

In the Matter of) WT Docket No. 97-12
)
Amendment of the Amateur Service) RM-8737
Rules to Provide for)
Greater Use of Spread)
Spectrum Communication)
Technologies)

To: The Commission

COMMENTS OF

THE 220 MHZ. SPECTRUM MANAGEMENT ASSOCIATION
OF SOUTHERN CALIFORNIA (220SMA)

ON

NOTICE OF PROPOSED RULEMAKING

REGARDING: AMATEUR SPREAD SPECTRUM OPERATIONS

RELEASED: MARCH 3, 1997

220 MHz. Spectrum Management Assn.
21704 Devonshire St. #220
Chatsworth, CA 91311-2903
<http://www.220sma.org>

Prepared by:
James T. Fortney, K6IYK
President
<Jim@Fortney.org>

May 2, 1997

INDEX

OPENING SUMMARY	PAGE 2
DISCUSSION	PAGE 2
CONCLUSION	PAGE 5

Wm. of Copies rec'd
List ABOVE

0+9

OPENING SUMMARY

The 220 MHz. Spectrum Management Association of Southern California (220SMA)¹ is in general agreement with the Commission that the proposed amendments would allow for increased spectrum efficiency and allow Amateur operators to contribute to technological advances in communications systems and equipment. We do however believe that there are additional concerns not discussed in detail in the NPRM that require consideration before final rulemaking actions are taken. Specifically these have to deal with: a) Spread Spectrum (SS) operations in areas where the Amateur community determines that formal coordination procedures are in the best interest of Amateur Spectrum Management; b) SS operations on frequencies below 420 MHz.; c) identification of SS emitters; and d) the application of Automatic Power Control (APC) techniques to SS. Our detail comments follow.

DISCUSSION

The 220SMA is an Amateur General Membership organization open to all Amateurs interested in the 220 MHz. bands. The leadership and general membership of the organization have actively followed the development of SS operations in Southern California for several years. Members of the existing STA's have helped educate the membership concerning the principals of SS operation by making presentations at our General Meetings. The present Docket was formally

¹The 220SMA is the Amateur spectrum management coordinator for the 220 MHz. bands in Southern California and serves as the regional coordinator for 219 MHz. Digital Linking and 222-225 MHz. Repeater Coordination. The Association is formally recognized by the five Councils of Radio Clubs representing Amateurs in the 220SMA service area.

discussed at the April 19, 1997, General Meeting and the ideas and concerns discussed herein were formulated at that meeting.

In general the membership supports the proposed amendments to the Amateur Rules relaxing the controls over SS operation. There is however concern that this mode, much like dedicated link and repeater operations, may need and benefit from formal coordination processes.

COORDINATION

If Amateur SS operations become half as pervasive as their proponents suggest they will, the potential for severe cross-mode interference at developed communications sites is significant. In the same manner that fixed frequency emitters benefit from coordination of co-channel and adjacent frequency operations, and site location proximity, these same activities will benefit from managing common site mixed mode operations (i.e., Repeaters and SS Hubs) and, in the case of frequency hopping SS, by managing the hopping frequencies so as to minimize on frequency interference.

In reference to Part 97.311(b) proposed language, the current Notice suggests that SS in the Amateur Service should be a subordinate mode and operate much as it does in the unlicensed Part 15 environment. This situation may be appropriate under Part 15 but probably should not apply in the Amateur world of advancing technology. The 220SMA believes that regulatory recognition of the fact that when interference occurs between a coordinated emitter and an uncoordinated emitter, the uncoordinated emitter is responsible for resolving the interference, is as

important under SS and mixed mode environments as it is in the fixed frequency world of repeater operations.

We would prefer to see regulatory language which would allow the Amateur community to manage the interference potential between modes, much as it does today where it is allowed to plan the use of its own bands. History has proven that regional characteristics such as population density and geographic considerations make 'one size fits all' decisions less than optimum for anyone.

OPERATING FREQUENCIES

Although the subject Docket proposes to retain the current restriction of SS operations on 420 MHz. and above, there have been suggestions that SS should be allowed on lower Amateur frequencies. Based upon both theoretical analysis and empirical tests, it appears that heavy SS usage on a band will eventually degrade the noise floor and significantly affect operations that are sensitive to random noise. The 220SMA does not want to close the door to possible future SS operations on the 220 MHz. and below bands, but does believe that because of the population density and weak signal uses of those bands, SS operation should not be authorized at this time. The membership believes that an appropriate period of developmental operation on the higher bands will demonstrate the realistic high density sharing characteristics between SS and other modes. We recommend that the Docket provisions in this area be retained as proposed.

SS EMITTER IDENTIFICATION

The requirement for CW identification of an SS transmitter is considered totally inconsistent with sound technological practice and should be replaced with a technique native to the SS mode being used.

AUTOMATIC POWER CONTROL (APC)

Although operation at the minimum output power required to establish and maintain communications is considered good practice, and APC techniques are a good way to enforce implementation of this practice, we believe that there are significant shortcomings in the proposed APC technique. At a minimum, provisions need to be made for the circumstances where SS emitters are trying to initiate contact with yet to be identified stations, or where they are operating as a central node in a multi-cast environment.

CONCLUSION

The 220SMA endorses the proposal to provide relaxed Spread Spectrum regulation in the Amateur Service. We recommend that the general provisions regarding interference be revised to require a formal emitter coordination process when elected by the local/regional body of Amateurs. We agree with the proposed operating frequencies and suggest that no authorization to use lower frequency bands be granted until there has been an opportunity to evaluate higher density SS operations. We believe that a requirement for identification in a mode other than SS is inappropriate. Lastly, we recommend that the Automatic Power Control provisions be supplemented to provide for implementations beyond the point-to-point environment implied by the proposal.